

73. GRUS ANTIGONE (Linn.).

Probably a wanderer from the big swamps at Heho, 16 miles east.

74. LOBIVANELLUS ATRONUCHALIS, Blyth.

Two small flocks were always to be seen in the dry rice-fields near the village.

75. GALLINAGO STENURA (Kuhl).

Only one seen in April. They are found further east in the month of May.

XXXIII.—*Notes on some Species of the Families Cypselidæ, Caprimulgidæ, and Podargidæ, with Remarks on Sub-specific Forms and their Nomenclature.* By ERNST HARTERT.

(Plates VI. & VII.)

HAVING recently gone over the same ground as five years ago, I find that in a new list of Goatsuckers and Swifts I shall have to make quite a number of alterations and additions, and I wish to explain and to discuss some of the points in the following pages. I sincerely hope that nobody will blame me for inconsistency in cases where I do not agree with my own former conclusions. To my mind it is much more truthful and honourable to our beloved science to correct one's own mistakes, admitting that one has altered his opinions for (at least what one believes to be) the better, or that one has gained new knowledge in the course of time, than to adhere with obstinate consistency to what one has written before.

As regards my treatment of closely allied forms, it may be known to my colleagues that I am a strong advocate of the study of *subspecies*, not because I like them, but because I see that there *is* something more than species only. This is one of the revelations brought home to zoologists by Darwin and his school, and unless we close our eyes and ears against the facts before us, we must not merely admit that sharply separated species do not alone exist, but we must

also acknowledge this fact in our systematic treatment of such forms, and recognize it in our nomenclature, or both our work and its nomenclature will be inadequate and insufficient. To my mind it is of just as much, or perhaps of more interest and importance to see that a species grades, for example, from a small and dark western form into a large and pale eastern form, so that, if the extremes only were known, they would be readily recognized as "good species," as to discover that a genus contains, for example, ten species instead of nine. A mistake, however, in my opinion, is generally made in speaking of so many species *and* so many subspecies, as if the latter existed besides the former, while, in fact, the subspecies are subdivisions of the species; and it would be more correct to say that there are so many species *with* so many subspecies, as if the latter formed parts of the species. Thus, instead of enumerating (1) *Acredula caudata*, (2) *A. caudata rosea*, as if they were two species, we should speak of the Long-tailed Tit, *Acredula caudata*, and we should divide this into (a) *A. caudata typica* and (b) *A. caudata rosea*. To name the subspecies, *i. e.*, such forms which cannot rank as full species, is as important and as necessary for our convenience as it is to name the species, for they must be quoted, and it is out of the question to give diagnoses of them whenever they are spoken of. In the case of *Acredula*, for example, there seems no difficulty whatever in naming the second form (b) *A. caudata rosea*. The trinomial is, for such cases, most convenient, and undoubtedly the shortest way. To name the subspecies in the same binomial way as the species is unquestionably wrong, since we do not consider them to be species! If our learned friend, Dr. Sharpe, writes *Corethrura reichenowi*, subsp. nov., then he does the same that the "trinomialists" do: it is naming a form which is *not a species*, and yet he names it exactly like a species. If then it is quoted afterwards with his binomial name, it is impossible to recognize that it is not meant to be a species. To term it, on the other hand, *Corethrura pulchra reichenowi* at once simplifies matters and shows what the form in question is considered to be. There cannot be a simpler and

more convenient method, and yet Dr. Sharpe calls it a clumsy method; but I cannot help considering the way of saying "*Corethrura pulchra* subsp. *reichenowi*" much more so.

In any case, even if the trinomial plan is not used, the naming of the subspecies that we separate from the originally described form is the least part of the trouble. The difficulty is how to name the other form! The Long-tailed Tit is generally called, if I may be allowed to use again the former example, *A. caudata* pure and simple. But that is not sufficient, because when only this expression is used we are not always certain whether the author means to restrict that name to the white-headed eastern form, or includes in it all the forms of the species. If, therefore, the first-named form alone is intended, it ought to be expressed in the way of naming it. The best way seems to me to call it *A. caudata typica*, and this method has already been employed by ornithologists and by Mr. O. Thomas and Mr. Sclater in mammalogy. This is decidedly better than to name it *A. caudata caudata*, as has been proposed on the Continent; but this kind of nomenclature has been used, so far as I am aware, only in a few entomological papers. This repeating of the specific name seems specially awkward in the cases of the unavoidable tautonymic names, where such names would occur, as *Perdix perdix perdix*! If this sort of cubic nomenclature can be avoided, pray let us do so. When the author's name has to be added, Mr. O. Thomas and others (myself included) have written *A. caudata typica* (Linn.), and I have also seen *A. caudata caudata* (Linn.). Both methods are decidedly wrong, for Linnæus, or whoever was the original author of the species, had, in most cases, no idea of there being any closely-allied subspecies; and if they knew the form, they would, in former days (as is often done now, I am sorry to say), either have included it in the synonymy of their species ("lumper"!) or have separated it specifically ("splitter"!). The original author of the first-named specific form should therefore not be made responsible for our subspecies. We should write *Acredula caudata* (L.) *typica*, or, if the other (clumsy) method is used, *Acredula caudata* (L.) *caudata*. The term *typica* stands thus

without an author's name attached to it, not treated like a new name, but merely as an acknowledged term to designate that form of the species under consideration which was first introduced into science. I may be allowed to add that the *first-described form* must, for practical reasons, always be called the "typical" one, and that the question of the real ancestral or oldest form should *not* be taken into consideration when establishing this sort of nomenclature, because we are but very seldom able to say, *a priori*, which form existed first, and because any other consideration than simple priority would lead to a constant disturbance of our trinomial nomenclature. In cases where a species of the genus is already named "*typicus*" (which cases are rare), the name might, *faute de mieux*, be repeated, or a new name for the should-be *forma typica* may be invented. Such questions are left more or less untouched in most "Codes of Nomenclature," and therefore I wish to call the attention of all friends and students of exact systematic work to them.

Other distinguished authorities—contrary to Dr. Sharpe, who calls them by binomial names—do not name subspecific forms at all, though they have a good notion of their existence. Let us take, as an example, *Caprimulgus macrurus* in Blanford's 'Birds of India.' Under that binomial title are included such different forms as *C. albonotatus* and *C. atripennis*. Although these are best considered as subspecies, and not as species, because they are connected by intermediate forms with *C. macrurus*, the extremes of these forms are so different that every student who enters the field will regard them as different species, they, *i. e.*, the extremes, being more distinct from each other than many forms universally recognized as species. I am sure that no Indian field-ornithologist would understand the uniting of *C. albonotatus* from North India with the Ceylonese *C. atripennis* under one name, and that he would gain much more knowledge, and comprehend much better their relations, if they were treated under different heads as *subspecies*, as then he understands that they are not considered identical, though they intergrade—intermediate specimens, when met with, being also thus

explained. Indeed, the relationship of many forms is the better understood the more subspecific forms are recognized (supposing that there is any foundation for them); and it being evident that such forms exist, they *must*, in my opinion, be recognized, because to disregard them altogether is as unscientific as to treat them as well-defined species. It is impossible to deny the existence of subspecific forms, and it is wrong to treat them as species, because intermediate forms occur; therefore we must agree that the *scientific systematic treatment of living animals DEMANDS the recognition of subspecies*, if systematic zoology is to be more than a pastime, and if it is to take the important place in science which it ought to hold.

The Genus MICROPUS.

In the genus *Micropus* (*Cypselus*, auctt. mult.) I have to recognize two more species—i. e., *M. shelleyi*, Salvad., and *M. willsi*. With regard to the former, I refer to my remarks on p. 445 of Cat. B. xvi., and have to add that I have seen one more perfectly adult skin (now in the British Museum), which has convinced me that it is a distinct species, resident in the mountains of Shoa and Abyssinia, and characterized by its shorter wing (6.1 in.) and shorter (2.75 in.) and less pointed rectrices.

I have been looking through my old note-books, and find that in none of the numerous nests of Common Swifts which I have taken and seen on the Continent were there more than two eggs or two young birds. Several of my friends assure me also that they never heard of more than two eggs in a clutch. Nevertheless, in almost every book the number of eggs of the Swift is given as two or three, or sometimes even four. I am anxious to hear from the members of the B. O. U. whether this is, as I believe, a story repeated from one book into the other, or whether anyone has himself taken a clutch of more than two eggs of the Common Swift.

M. murinus, Brehm (= *M. palhdus*, Shelley), which I treated as a subspecies in the Catalogue, is so very distinct from *M. apus typicus* that most writers regard it as a good

species. I should be quite willing to do the same, were it not for some specimens in the British Museum which stand somewhat between the two. There is no constant difference except in the paler colour. I have also recognized the eastern bird as a subspecies, calling it *pekinensis*; but I must admit that it is by no means so distinct as *M. murinus*, and that it is very difficult, and often impossible, to say to which of these forms a given specimen should be referred. Nevertheless, I think it was just as well to accept the eastern paler form as a subspecies, as such a recognition draws general attention to it, and may better tend to further enlightenment on the subject, than if it had been passed over in silence.

I have no evidence that *M. murinus* ever breeds south of the Mediterranean. Mr. Whitaker (above, p. 97) says that *M. apus* breeds "at Tunis and other towns in the north of the Regency"; but he kindly informs me (*in litt.*) that specimens were not shot, or at least not preserved, and therefore his statement is open to doubt. I have seen specimens from the north coast of Tunis, shot during the breeding-time, which were all *M. murinus*, and it is not likely that both breed in the same places.

The white-rumped Swifts of Tunis, which were recorded as *M. affinis* by Koenig, are described as a new species (*M. koenigi*) by Reichenow. They are, however, in my opinion, not specifically different, but may be regarded as an extreme *M. galilejensis*, Antiu., if that form is kept subspecifically distinct (see Cat. B. xvi. pp. 454, 455). Peruvian examples of *M. andecola* have been separated as *M. a. parvulus* by Berl. & Stolzm. (P. Z. S. 1892, p. 384), on the ground that they are smaller; but I am not convinced that the small size is peculiar to Peruvian birds, for the skins in the British Museum do not agree with that theory.

M. niansæ, Rehw., which I had not seen when writing the Catalogue, is a good species, and may be described as a very small *M. æquatorialis*.

The above-mentioned *M. willsi*, described in 'Novitates Zoologicæ,' iii. pt. ii., shows a similar relation to *M. melba*,

from which it is distinguished by its very small size and by the less extended white colour on the underside only. The discovery of *Uratelornis chimera*, Rothsch., and of this interesting Swift would seem to indicate that the avifauna of Madagascar is not yet entirely explored, in spite of the many collections made there and of the excellent works written on it.

In the measurements of *Tachornis batassiensis* in Cat. B. xvi. p. 466 is a misprint (or slip of the pen), the lateral rectrices being 2·5, not 3·5 inches in length!

4. *Chætura zonaris pallidifrons*, subsp. nov., is a new subspecific term which I must introduce for the large West-Indian Spine-tailed Swifts. I noticed the difference of the West-Indian specimens when writing the Catalogue of Swifts, and kept the synonymy of the continental and West-Indian birds separate, and made remarks about them on p. 477. However, being cautioned most kindly by Mr. Salvin, who gave me so much valuable advice during my work, I refrained from distinguishing the West-Indian form. Now recently I have been able to study quite freshly-moulted birds, in most beautiful skins, sent by Mr. C. B. Taylor from Jamaica to the Tring Museum, and I find that they show the same characters as those in the British Museum—*i. e.*, a pale forehead and a short and very narrow, but very obvious and well-defined supraloral line. I therefore do not hesitate any longer to separate this form subspecifically.

In the description of *Chætura cassini* on p. 488, it should be: "sides of body and under *wing-coverts*," instead of "under tail-coverts."

The Genus COLLOCALIA.

In 'The Ibis' (1895, p. 459), in one of his careful and excellent articles on Philippine birds, Mr. Ogilvie Grant described a new *Collocalia*, which he named *C. whiteheadi*. In the following pages he made some valuable remarks about *C. lowi* and about *C. fuciphaga* and its allies. With regard to the latter, it is quite evident, from my words on p. 501 of the Catalogue, that I, when stating the differences of

my subspecies *C. brevirostris*, inadvertently took for comparison with the latter skins from the Indian Peninsula only, which I considered to be the same as those from the Islands. Unfortunately I had overlooked the fact that the tarsus is nearly always thinly feathered in insular examples of *C. fuciphaga*, while the Nilghiri birds have invariably quite unfeathered tarsi. It becomes, therefore, necessary to recognize the Indian *C. unicolor* as a subspecies, though I am not prepared to call it a species, as the feathers on the tarsi cannot, in some cases, be found in insular examples of *C. fuciphaga*—for example, in some Celebes skins,—and as the differences in colour are slight, and sometimes birds from the Islands cannot with certainty be distinguished by their colour from Nilghiri specimens. It is, of course, not impossible that the Celebes birds or others may be separated as subspecies at a future time, with the help of much good fresh material, but, from all I have seen, I cannot at present find characters for a new subspecies. However, though I admit fully the correctness of Mr. Grant's observations, I see no reason for his not allowing as a subspecies *C. brevirostris* from the Himalayas, which has (as Mr. Grant admits) a constantly longer wing and a somewhat paler rump. I would consequently now arrange the group of *Collocaliæ*, without white on the abdomen and without a distinct whitish rump-band, as follows:—1. *C. whiteheadi*, Grant; 2. *C. lowi* (Sharpe); 3. *C. fuciphaga* (Islands), with its subspecies *C. f. unicolor* (Indian Peninsula and Ceylon) and *C. f. brevirostris* (Himalayas).

A very unfortunate mistake has been made on p. 434 of vol. xvi. of the Cat. B., where a synopsis of families (by the Editor) is given, which reads as follows:—

- a. Palate ægithognathous: *Cypselidæ*.
- b. Palate schizognathous: *Caprimulgidæ*.
- c. Palate desmognathous: *Steatornithidæ*, &c.

Now the palate has *never*, as yet, been found to be schizognathous in any member of the family Caprimulgidæ! I cannot, for certain, say where the mistake originated, but I find it made by Seebohm, and by Sharpe ('Review of

Recent Attempts to Classify Birds'). It was then repeated in Cat. B. xvi. p. 434, and, I am sorry to say, also by me, when stating the principal characters of the Caprimulgidæ (Cat. B. xvi. p. 519). How I came to repeat the error I do not know, but it was unpardonable, no doubt.

According to most valuable and kind information of Dr. R. W. Shufeldt, of Washington, D.C., the palate is ægithognathous in *Caprimulgus europæus*, *C. vociferus* ("Antrostomus"), *Phalacroptilus nuttalli*, *Nyctidromus*, and others, while it is distinctly desmognathous in *Chordeiles* (several species examined). With regard to *C. europæus*, the palate was also found to be ægithognathous by Sharpe (see 'Handb. Brit. Birds,' vol. ii.), and I can confirm this, and the desmognathous palate of *Chordeiles*, from my own inspection. See also Huxley (P. Z. S. 1867, pp. 450-451, f. 35) and Dr. Shufeldt's important investigations (P. Z. S. 1885, pl. lix.; Journ. Linn. Soc. Lond., Zool. xx. pl. xx.), and others. It is very remarkable, and an important proof that single characters of that kind cannot safely be used to diagnose families, that among the Caprimulgidæ we find palates which are of different constructions. The value of the structure of the palate as a taxonomical character has undoubtedly been overrated.

Chiefly instigated by the small *Caprimulgi* found by Prof. Koenig in Algiers, and by the very small specimen shot by Mr. Grant on the Salvages, I have paid more attention to the southeru specimens of *C. europæus*, and have found that those from South Spain are generally very short-winged, but very dark—in fact, about the darkest birds of all, like West-European specimens in general; that most of those from Algiers and Tunis are rather small, and some rather paler too. Recently also I have received a good series from Greece, from Mr. W. Schlüter, which are all very short-winged, while many, though not all, of them are somewhat paler than West-European forms. It is therefore evident that Southern birds (of course wanderers excepted) are short-winged, and may be separated as a subspecies, which may be named *C. europæus meridionalis*, while they are darkest in the west,

and towards the east they show a tendency to become paler (*cf.* Cat. B. xvi. p. 527, under "*Hab.*").

Mr. Ogilvie Grant, in his remarks in 'The Ibis,' 1894, pp. 502 and 518, holds Lord Tweeddale and me to blame for not having separated from *C. manillensis** the single specimen of a Goatsucker collected by A. B. Meyer in Celebes. With a good series of *C. manillensis* before him, he found that they *always* have only the terminal portion of the *inner* web white, while the Celebes bird has both webs tipped with white and the rictal bristles longer. These observations are quite correct, and I had noticed these differences when working out the Caprimulgidæ for the Catalogue, but being very anxious to avoid the naming of any "bad" new species, and not having seen many *C. manillensis*, I did not dare to separate that single specimen. Now, having examined many more *C. manillensis*, I quite agree with Mr. Grant that the Celebes bird should be kept apart, but I object to his sentence that "two more totally distinct species of Goatsucker can hardly be imagined." These words are about as gross an exaggeration as can be "imagined," for (let alone the magnificent "Goatsuckers" of aberrant genera) a glance at any collection of the genus *Caprimulgus* only will show that the majority of species are more widely different from each other than *C. manillensis* from *C. celebensis*.

On the same page Mr. Grant speaks of *Lyncornis mindanensis* being obtained in Luzon. The specimens collected there by Mr. Whitehead are certainly *L. mindanensis*, if the latter is specifically different from *L. macrotus*; but I looked upon the two (*op. cit.* p. 605) as representative forms inhabiting Luzon and Mindanao, and even now doubt their specific distinctness, though we must still learn more about them before we finally decide.

Mr. W. T. Blanford, in his admirable volume (iii.) on the 'Birds of India,' p. 189, says: "Somewhat to my surprise, I found the South-Indian and Ceylon *C. atripennis* identical with typical *C. macrurus* from Java (the original locality). It is a small bird of very dark colour, the primaries without

* The author is *not* Gray, who never described it!

any rufous markings in adult males." We find, consequently, *C. atripennis* included in the synonyms of *C. macrurus*. Sorry as I am to disagree, even in the slightest point, with a zoologist like Mr. Blanford, I cannot help recognizing differences between *C. atripennis* and *C. macrurus*. In the former the white spot beyond the middle of the second primary is separated in the middle, that on the inner web not reaching the shaft, while in the latter it is continuous, that on the inner web reaching, or broadly touching, the shaft. In the grand series in the British Museum is, I believe, only one skin of *C. macrurus typicus* in which the white spot on the second primary is separated in the middle, and it is continuous in none of those of *C. atripennis*. The crown of the head in *C. atripennis* seems to be of a somewhat finer mottling, and the black spots are more strictly confined to a limited line along the middle of the head, while they are not so median, but rather scattered over the centre parts of the head, in *typical C. macrurus*. In well-prepared skins I find this character very constant, though it is not a very striking one to the casual observer. However, the spots are also very mesial in the large and pale *C. macrurus albonotatus*, and there is a skin in the Hume collection "the size of *C. atripennis*, but with the coloration of *C. albonotatus*" (Blanford, l. c.). Under these circumstances, and bearing in mind that *C. albonotatus* is only subspecifically different from *C. macrurus typicus*, we may admit that intergradations take place between *C. albonotatus* and *C. atripennis*, and may also assume that the latter intergrades with *C. macrurus typicus*, though this is not very comprehensible geographically. Therefore, I believe, *C. atripennis* must be added to the *subspecies* of *C. macrurus*, but I, for my part, shall never allow it a quiet rest among the synonyms of the latter.

In studying these forms I find, further, that the intermediate forms between *C. albonotatus*, Tick., from North India, and *C. macrurus*, Horsf., *typicus*, from the Malay Peninsula, Burma, Assam, and the Eastern Himalayas, form a rather definite group of well-marked geographical limitation, such forms not being known from Java, Borneo, and

from further to the south and east. They may, therefore, with advantage be named *C. macrurus ambiguus*, subsp. nov. This is the form which has been described by Jerdon, Hume, and other Indian ornithologists, who were not acquainted with the typical form from the archipelago, as *C. macrurus*.

The specimens from Nepal and the lower parts of the Western Himalayas, which I described in Cat. B. xvi. p. 541, form also (though very variable) a peculiarly marked group, and do not occur, so far as I know, in other parts. They may therefore also receive a subspecific title, for which I propose *C. macrurus nipalensis* (from Hodgson's MS.).

In the 'Catalogue of Birds,' p. 594, I unfortunately adopted the name *Caprimulgus macrodipterus* of Afzelius, being under the impression that it had been published, as it had been quoted in several books, in the year 1794. My mistake was made chiefly because I misunderstood Sundevall's remark in his article in the 'Öfversigt af Kongl. Vetenskaps-Akad. Förhandlingar,' vi. p. 156-163. Now I have found out that I was wrong, and I have got an exact translation of that Swedish article, so that a mistake is impossible, and it becomes evident that the plate in question was printed, or at least drawn, but never published, nor any description of it. The name *C. macrodipterus* can therefore *not* be adopted, and the species must again be called *Macrodipteryx longipennis* (Shaw):

The genus *Cosmetornis* should again be united to *Macrodipteryx*, the second species of that genus therefore standing as *M. vexillarius* (Gould). The females of the two species cannot possibly be separated generically; in fact they also agree in colour and markings, and differ only in size. The sexual ornaments of a bird should not be taken as generic characters, for one should certainly be able to find out the right genus in which to place a species from a female, without knowing the male. Entomological examples show the danger of using male ornaments as generic characters, and the same rules that apply to insects should, in my opinion, also apply to birds, so far as the arrangement of groups, such as families and genera, are concerned. General agreement on these points, however, it is difficult to obtain, since the idea of

what should be regarded as proper generic characters is, and always has been, entirely different among ornithologists.

† NANNOCHORDEILES, gen. nov.

The little *Chordeiles pusillus* differs considerably from its larger allies in the form of the wing. In *Chordeiles* (sensu strictiore) the first primary is longest, the second a little shorter, the third very considerably shorter, and the further decrease great. In *Ch. pusillus* the first three primaries are of about equal length. This makes the wing much rounder and broader, and, no doubt, the flight of the bird must be very different from that of the long- and pointed-winged larger species. The scapulars reach to, at least, two-thirds of the length of the wing; the tarsus is quite unfeathered. These characters will, I believe, justify a generic separation of the little *Chordeiles*.

In the genus *Caprimulgus* (including *Antrostomus*) I was not able to make any satisfactory generic groups, because the characters that might have been useful for that purpose are not constant enough.

In the genus *Podargus* I had, after much hesitation, united *P. cuvieri* with *P. strigoides*, although all the Australian ornithologists had kept them separate, because I found all sorts of intermediate sizes and colours, and because I could not limit them geographically. I had hoped that Australian residents would give their opinions on the subject, or rather their experiences. It must be admitted that the material in the British and other European museums in which I had been able to study, with exact localities, dates, and sexes determined by competent men, is but scanty, and such localities as "N. S. Wales" and "Queensland" are often open to doubt, besides being rather vague. I hope local observers will find my course the right one; at any rate, with the material before me, I could not take any other.

In spite of my uniting all those forms from Australia, I had lately (Bull. B. O. U. vol. v. p. x) been obliged to describe a new *Podargus* from the islands east of New Guinea, which I found to be nearly constant in size and



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ÆGOTHELES INSIGNIS.



to stand just in the middle between *P. papuensis* and *P. ocellatus*. These species, it must be admitted, do not differ in many respects, except in size, one being much more than twice as large as the other.

I will now conclude with some remarks on the genus *Ægotheles*. It is remarkable how seldom one gets specimens of *Ægotheles*, except the Australian *Æ. novæ-hollandiæ*. Several of the described species are only known at present from single specimens, and the majority from a few skins only. We know, as yet, next to nothing of the seasonal and sexual differences of these birds, nor of the limits of variation in the species. These, however, are wide in *Æ. novæ-hollandiæ*, and therefore the fear that some of the described species are not worthy of specific rank is not without foundation. From the large island of New Guinea we only know *Ægotheles* from the Arfak region and from the mountains of British New Guinea, and these have received not less than ten specific names. Of these *Æ. insignis*, Salvad. (now figured on Plate VI.), is the most brilliantly coloured, being almost as fine as *Æ. crinifrons* from Ialmahera and Batjan. It is only known from a single specimen in the Genoa Museum, which has been most courteously lent me by Dr. Gestro. Of *Æ. albertisi* I know of two specimens—one, the type, in Genoa, and one, marked ♀, in the Tring Museum. Both are apparently young birds. Of *Æ. dubius*, Meyer, the type only, in Dresden, is known. It may or may not be different from *Æ. albertisi*, from which it seems to differ in colour only. *Æ. salvadorii*, Hartert, is represented in the British Museum, and three more specimens are now before me which were collected by Mr. Loria in the same place whence the type came. Another closely allied form has just been described by Salvadori as *Æ. rufescens*, from a female from Moroka, in British New Guinea. I quite agree with Salvadori that it is a distinct species; but it may possibly be Ramsay's *Æ. plumifera*, though there are characters given in the latter author's description which are not indicated in the type of *Æ. rufescens*, so that they cannot be united without further researches. *Æ. affinis*, Salvad., is also known from

a single female only, from Arfak. It is represented now on Plate VII., and I am again much obliged to Dr. Gestro for giving me the opportunity of figuring the type in 'The Ibis.' Then there are *Æ. bennetti*, Salvad., and *Æ. wallacei*, Gray, both known from a number of specimens, and lastly *Æ. plumifera*, Rams. In the original description this species was compared with *Æ. bennetti*, but it seems much more closely allied to *Æ. rufescens*, or less probably *Æ. salvadorii*. Salvadori has also described an *Æ. loriæ* (Ann. Mus. Civ. Genova, xxix. p. 564), which I kept separate in the 'Catalogue of Birds,' xvi. p. 650. Dr. Gestro has now lent me the type, and I am sorry to say I cannot distinguish it in any way from the darker specimens of *Æ. bennetti* in the British Museum, though in the original description it has only been compared with *Æ. wallacei*, which is, of course, different.

P.S. *May 12th.*—During my recent visit to Paris, Dr. Oustalet kindly showed me his series of *Collocalia germani*, described in Bull. Soc. Philom. Paris, 1876, p. 1–3, and I found them to be the same as the form named *C. merguensis* (subspecies of *C. francica*) in the Cat. of Birds. Of course Oustalet's name has the priority by a long way. I also saw *Chatura cochinchinensis* of Oustalet. It is a very small form of *Chatura caudacuta nudipes*, having the tail square, and is not at all related to *C. gigantea*. Dr. Büttikofer has also kindly sent me a sketch of the tail of his *C. klaesii*, which is square. It is evidently the same bird. The species probably breeds somewhere in the north, and both the type-specimens were shot on migration.

XXXIV.—*On the Skull, Sternum, and Shoulder-Girdle of*
Æpyornis. By CHAS. W. ANDREWS, B.Sc., F.G.S.,
 Assistant in the British Museum (Nat. Hist.).

(Plates VIII. & IX.)

A SMALL collection of remains of the extinct birds of the genus *Æpyornis*, including portions of two skulls, two